Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_\_\_

CW 18: Linear Functions

**Honors Geometry**

Can you determine that any of these functions are nonlinear just by looking at the data table, without doing any calculations?

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

1. The table below shows the relationship between the number of photos *x* you take and the amount of memory *y* in megabytes (MB) left on your camera’s memory chip. Is the relationship a linear function? Describe the relationship using words, an equation, and a graph.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table:**   |  |  | | --- | --- | | **Input:** | **Output:** | | **# of photos, *x*** | **Memory (MB), *y*** | | 0 | 512 | | 1 | 509 | | 2 | 506 | | 3 | 503 | | | **Words:** |
| **Equation:** | **Graph:** | |

*For each table below, determine whether the relationship is a linear function. Then represent the relationship using words, an equation, and a graph.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | *x* | *y* | | 0 | 5 | | 1 | 8 | | 2 | 11 | | 3 | 14 | | |  |  | | --- | --- | | *x* | *y* | | 0 |  | | 1 | 2 | | 2 | 7 | | 3 | 12 | | |  |  | | --- | --- | | # of hrs climbing, *x* | Elevation (ft), *y* | | 0 | 1127 | | 1 | 1219 | | 2 | 1311 | | 3 | 1403 | |
| |  |  | | --- | --- | | *x* | *y* | | 0 | 43 | | 1 | 32 | | 2 | 21 | | 3 | 10 | | |  |  | | --- | --- | | # of soup cans, *x* | Total Bill, *y* | | 0 | $52.07 | | 1 | $53.36 | | 2 | $54.65 | | 3 | $55.94 | | |  |  | | --- | --- | | Miles traveled, *x* | Gallons of gas, *y* | | 0 | 11.2 | | 17 | 10.2 | | 34 | 9.2 | | 51 | 8.3 | |